

Consumer Characteristics and Technology Based Self Service Banking Service Quality: Evidence from Delhi NCR Region

Rajiv Sindwani*

Abstract

Technology based self service banking (TBSSB) refers to automated banking services availed by the customers using an assortment of technology based banking channels like ATM banking, Mobile Banking, Internet banking and Interactive Voice Response (IVR) Phone banking without interacting with bank employees. The aim of this study to explore the characteristics of TBSSB customers and to understand the effect of their characteristics (Gender, Age, Education, Occupation, Income) on four TBSSB service quality dimensions (Convenience, Reliability & Security, Responsiveness, Personalization). Data is collected from 414 TBSSB customers who are above 18 years of age and use at least one mode of automated banking services. Data is analyzed with the help of Levene's test of homogeneity of variance, t test, one-way analysis of variance (ANOVA) to assess the significant difference. The results show the significant influence of Age on Reliability & Security dimension, and Education on Personalization dimension. Post hoc analysis is also used for the detailed analysis. The research suggest bank management to give due importance to the characteristics of the automated banking customers at the time of service design and service provision to enhance customers' perceptions of TBSSB service quality.

Keywords: Automated Banking, Technology Based Self Service Banking (TBSSB), TBSSB Customer Characteristics, TBSSB service quality dimensions, Levene's test, t test, One-way Analysis of Variance (ANOVA), Post Hoc Analysis

Introduction

India has witnessed a tremendous development in the banking sector due to introduction and diffusion of information and communication technologies. One of the biggest contributions of technology is the development of various modes of electronic banking (e-banking). Researchers have characterized e-banking majorly into automated teller machines (ATM Banking), internet banking, mobile banking and telephone banking (Joseph & Stone, 2003; Sindwani & Goel, 2015a). Foreign national banks and private banks were pioneer in launching these services in India. HSBC bank was the first to start alternate channel automated banking services in India by establishing ATM in 1987. Presently the public sector banks are also aggressively investing in the automation of banking services (Joshua, 2009).

Today almost all the commercial banks irrespective of sector (Public, Private, and Foreign National) are offering wide range of electronic banking services to its customers (Joshua, 2009; Sindwani & Goel, 2015b). TBSSB has shown significant improvement in the last decade. Analytics and artificial intelligence are already being used by banks to do various jobs. Traditional jobs like passbook updating, salary uploads, cash deposit and verification of know-your-customer details are going digital. Banks like Axis Bank, ICICI Bank, SBI, HDFC Bank and others are pushing the boundaries of technology by using robotics to centralise operations and for quicker turnarounds in things like loan processing and selling financial

* Assistant Professor, Department of Management Studies, YMCA University of Science and Technology, Faridabad, India.
Email: rajiv_sindwani@yahoo.co.in

products to customers. Branch banking is progressively being replaced by automated alternate banking channels (Sindwani & Goel, 2015c). The services rendered through these channels are beneficial for both the banks and their customers. The use of technology is greatly advantageous to the banks as it can standardize service delivery, expand the options for provision of services, reduce costs, and leads to lesser load on branches. For the customers, these automated modes act as a boon in the form of anytime, anywhere banking (Sindwani & Goel, 2012a). As the products offered by the banks are mostly indistinguishable in nature, banks are trying to get competitive advantage on aspects like service quality to enhance customer satisfaction and loyalty (Stafford, 1996; Sindwani & Goel, 2012b). This is so because customer satisfaction and loyalty is considered vital for an organization's survival and success in the long run (Hallowell, 1996; Ganguli & Roy, 2011; Sindwani & Goel, 2014a). To provide TBSSB services, banks have invested a hefty amount of money in infrastructure and other facilities. Moreover, this is not a one-time investment and every year banks in India spend a huge sum of money for up gradation and promotion of automated services. If the adequate focus on development, up gradation and promotion is not there, huge investment will go in vain. To better understand the TBSSB customers' requirements, time to time banks are required to conduct TBSSB studies. Acceptance of automated banking services is increasing among Indian bank customers and this growth has resulted in rising interest of academicians and bankers in measuring automated banking service quality (Sindwani & Goel, 2012c). With time various scales representing dimensions (critical factors) of automated banking service quality have been proposed by various researchers (Sindwani & Goel, 2014b). Researchers have studied the influence of consumer characteristics on service quality dimensions in case of individual banking technologies (Gupta & Bansal, 2011). But studies that have considered automated banking service quality dimensions by taking the broad common attributes related to all the channels of technology based banking and examined the effect of consumer characteristics on these dimensions are limited in nature. Therefore, the objective of this paper is to determine the effect of consumer characteristics on the dimensions of TBSSB banking service quality.

Literature Review

Dimensions of TBSSB Service Quality

Service quality across all the banking channels has been considered noticeably significant over the years. Some of the important studies conducted in various countries across the world for finding the dimensions of automated banking service quality are described below

Joseph et al. (1999) investigated the part played by technology in Australian banking sector. Their research found six dimensions of e-banking service quality as: convenience/accuracy, accessibility, feedback/complaint management, efficiency, queue management and customization.

Mäenpää (2006) based on an extensive literature review, exploratory interviews and quantitative analyses, proposed seven dimensions of internet banking service quality as security, convenience, auxiliary features, status, personal finances, exploration and investment.

Dhurup et al., (2014) provided an insight of technology based banking service quality in South Africa from the customer viewpoint. Their study was related to internet banking service quality. They found seven dimensions including ease of use, fulfilment, assurance, responsiveness, accessibility, speed and accuracy and contact.

Kaur and Kiran (2015) conducted a study to understand the consumers' perception about e-banking services of public, private and foreign sector banks operating in the Indian banking sector. They identified four e-banking service quality dimensions as Security, Website interface, Access and Convenience.

Amin (2016) conducted a study in Malaysia and identified four dimensions of internet banking service quality. The analysis results confirmed that all the four dimensions (personal need, site organization, user friendliness, and efficiency of website) were distinct constructs. The results also indicated that internet banking service quality consisting of four dimensions had appropriate reliability and each dimensions had a positive significant relationship with internet banking service quality.

Sindwani and Goel (2016) proposed a TBSSBsqual scale and identified the factors (dimensions) of technology based self service banking (TBSSB) service quality. Researchers collected the data using a structured questionnaire prepared by identifying and adapting attributes through a comprehensive literature review on automated service quality. Using exploratory factor analysis, they identified four broad service quality dimensions of TBSSB as Convenience, Reliability & Security, Responsiveness and Personalization. They confirmed four factor structure of TBSSB service quality by applying confirmatory factor analysis using AMOS software. The proposed model was empirically tested for unidimensionality, reliability, and validity.

On the basis of review of above mentioned studies, it is found that most of the studies related to automated service quality have limited scope. Most of them cover one channel of automated banking and corresponding attributes for measuring service quality. In this technology era, customers use more than one automated banking channel. So, limiting research to only one channel will not present the comprehensive picture of automated banking. The study conducted by Sindwani and Goel (2016) measured automated banking service quality or TBSSB service quality by taking into consideration common service quality attributes applicable to all the automated banking technologies (ATM, Internet Banking, Mobile Banking, Tele Banking). Moreover, their research was based on strong theoretical base, conducted using sound methodology and demonstrated good psychometric properties as a result of a number of reliability and validity tests. Therefore, the four dimensions Convenience, Reliability & Security, Responsiveness and Personalization proposed by Sindwani and Goel (2016) are used in this research to study the effect of demographic variables. As per the researchers, Convenience is concerned with customer ease, comfort and work simplification using TBSSB services. Reliability & Security is concerned with consistent accuracy, correct technical functioning and safety from intrusion of TBSSB services. Responsiveness is related with prompt service, guidance and support to customers in case of problem or queries related to TBSSB. Personalization involves providing one-to-one automated banking services as per customer preferences.

Demographic Variables and Service Quality

The impact of the customers' demographic characteristics such as age, gender, educational level, occupation and income on service quality dimensions, customer satisfaction and loyalty has been investigated by various researchers for different services.

Al-Tamimi and Al-Amiri (2003) conducted a research on Islamic banks in UAE and found that there were differences in the perception of service quality based on age, education level and the number of years for which the customer has been associated with the bank.

Ganesan-Lim et al. (2008) found that age was the significant factor in the perception of service quality of passenger transport services, but gender and income were not found have a significant effect.

Ilias et al. (2008) investigated the influence of demographic factors on the higher education institutions students' satisfaction and service quality. Furthermore, their work also tested the relationship of age with students' satisfaction and service quality. The demographic variables gender, age, race, and a semester of studies were not found to have any significant effect on student satisfaction. Also, there was no significant difference in service quality on the basis of demographic variables gender, a semester of studies and ethnicity.

Kilic (2010) conducted a study on Internet banking service quality and customer satisfaction in Turkey. Results indicated that demographic variables, such as gender, age, income level, and education level do not have a significant effect on the satisfaction level of Internet banking customers.

Kumbhar (2011) studied the relationship of demographic characteristics of customers on service quality, service value and overall satisfaction in Internet banking services offered by Indian banks. He found that perceived service quality, perceived value from Internet banking services and overall satisfaction in Internet banking differ by age group, education level, profession and income level of the customers, whereas no difference was found based on gender.

Gupta and Bansal (2011) analyzed the effect of demographic variables on customer perception of Internet banking service quality offered by banks in India. Demographic variables covered under study were gender, age, occupation, education level and income. Analysis revealed a significant difference between male and female customers' perceptions on Security/Privacy and Responsiveness dimensions. Results also suggested a significant difference in customers' perceptions by occupation and income groups whereas no significant difference was found on the basis of age and education level.

Palli and Mamilla (2012) conducted a study on the students studying in a higher education institution. The analysis showed that there was no significant difference in the overall satisfaction of the respondents in terms of age, occupation of the parent and total household income, but gender showed a significant difference in the students' opinion with regard to the service quality of departments of the university.

Saad et al., (2013) examined the degree to which demographic characteristics are associated with loyalty in case of credit card service. The demographics variables considered in the study were age, gender, income level, occupation and lifestyle of customers. The result of hypotheses testing displayed that only income level is associated with customer loyalty and no association is found in case of other four demographic factors.

Min and Khoon (2013) investigated the role of demographic factors in the evaluation of service quality. The study used the data from a survey conducted in a private higher education institution in Singapore. The results revealed that gender, nationality and the present level of the study were influential in the evaluation of service quality, but the age factor did not make any significant difference in the service quality evaluation. Nationality was found to be the most influential factor on service quality. Gender was found to have more impact on the level of satisfaction of the service than on service quality.

Khurana (2014) conducted a study on life insurance industry in India and investigated the effect of demographic variables (age, profession, gender, income, and marital status) on customer satisfaction. The results demonstrated a significant effect of age, marital status and income of respondents on customer satisfaction. The research did

not find any significant difference in satisfaction level of male and female customers, and customers belonging to different occupations.

Mishra (2015) conducted a research in Gwalior city to study the demographic factors and their effect on the customer satisfaction towards banking services. The result of their work showed that the gender and occupation variables were not having any effect on customer satisfaction towards banking services. However, significant difference was found among respondents from different age groups and educational background with respect to satisfaction from banking services.

Studies in banking and non banking contexts have found that consumer characteristics have influence on service quality. Most of the studies have considered Gender, Age, Education, Occupation and Income as demographic variables. As TBSSB customers come from different social and personal backgrounds, and that may influence an individual's overall evaluation of service quality. So, data corresponding to demographic profile of the respondents was collected in this study and the effect of demographic characteristics (Gender, Age, Education, Occupation and Income) on customers' perceptions of TBSSB service quality is examined using the following five hypotheses

- H1: There is a significant difference in perception of TBSSB service quality dimensions between males and females.
- H2: There is a significant difference in perception of TBSSB service quality dimensions across age groups.
- H3: There is a significant difference in perception of TBSSB service quality dimensions across education levels.
- H4: There is a significant difference in perception of TBSSB service quality dimensions across occupations.
- H5: There is a significant difference in perception of TBSSB service quality dimensions across income groups.

Objectives

- To study the characteristics of TBSSB customers in Delhi and NCR region.

- To examine the effect of consumer characteristics on TBSSB service quality dimensions.

Methodology

A survey is conducted on automated banking customers in Delhi and NCR region to investigate the influence of demographic variables on TBSSB service quality dimensions. Random sampling method was used for data collection from the customers of different banks in Delhi and NCR region with the help of self-administered paper-based questionnaires. Only those customers who are above 18 years of age and use at least one mode of electronic banking are considered in the survey. A sample was taken from the population being researched. A sample of 200 is required to give parameter estimates with any degree of confidence (Sweeney 2000; Gerbing and Anderson 1988). Taking into consideration the guidelines for sample size determination, 600 questionnaires were distributed to potential respondents. Out of 600 distributed questionnaires to electronic banking customers of different banks, 440 are received back. Only 414 from 440 responses are usable, resulting in response rate of 69 percent. The survey questionnaire constituted questions related to consumer characteristics (Gender, Age, Education, Occupation, Income) and five dimensions of TBSSB banking service quality. Fixed alternative closed ended questions are used to gather customers' demographic information. A 5-point scale is used to capture respondents perception related to various dimensions of TBSSB service quality. Descriptive statistics is used to summarize the respondents' characteristics. For data analysis, statistical techniques like Levene's test, t-test and analysis of variance is used. Levene's test of Homogeneity of variance is used to assess whether the k samples have equal variances. t-test and analysis of variance are used to compare the results based on the demographic variables.

Analysis and Results

Consumer Characteristics

Demographic profile of the respondents is exhibited in table 1. Analysis result shows that 236 (57 percent) of the respondents are male while 178 (43 percent) are female,

indicating the considerable number of both the genders in the survey. Age is classified into four groups and minimum participation of 42 (10.10 percent) is from respondents having age more than 45 years, which indicate the substantial participation of each age group respondents in the survey. The biggest group of respondents 159 (38.4 percent) are having age more than 25 and up to 35 yrs, this is followed by respondents having age more than 35 years and up to 45 yrs (30 percent). Out of 414 respondents, 250 respondents have completed graduation and 120 are post graduate and above, which points out that respondents are well qualified. As far as an occupation is concerned, the majority of respondents (234) are salaried class but a sizeable number of respondents from all the four categories of student, salaried, self-occupied and others (housewives, retired persons, pensioners, non-employed etc.) are part of the sample. Similarly, respondents from all income groups participated in the survey. Approx 40 percent respondents are having income more than 2 lacs and up to 5 lacs. The analysis results pointed out that the sample represents the entire population as survey captured responses from people from various age groups, income level, education, occupation and gender.

Table 1: Profile of the Respondents

		Frequency
Gender	Male	236
	Female	178
Age	18- up to 25 yrs	89
	More than 25 -up to 35 yrs	159
	More than 35- up to 45 yrs	124
	More than 45 yrs	42
Education	12th or Below	44
	Graduate	250
	Post Graduate and above	120
Occupation	Student	45
	Salaried	234
	Self employed	92
	Others	43
Income (in INR per annum)	up to 2 Lacs	87
	More than 2- up to 5 Lacs	157
	More than 5- up to 10 Lacs	120
	More than 10 Lacs	50

Influence of Consumer Characteristics on TBSSB Service Quality Dimensions

The t-test and Analysis of Variance (ANOVA) are used to find whether there is any significant difference in TBSSB service quality dimensions on the basis of demographic variables. The demographic variables covered under the study are gender, age, education, occupation and income. To examine the effect of demographic variables, significance value of 0.05 is used in this study. In case a significant difference was found in any factor on applying ANOVA test results, Post hoc analysis was carried out for detailed analysis. The t-test and ANOVA assume that the populations from which the samples are drawn have equal variances. Levene's test is generally used to test the homogeneity of variance. If significance value corresponding to Levene's statistic is higher than 0.05, then the samples are considered to be drawn from the populations having equal variance.

Independent Samples t-test is used to test H1 and H2 to H5 are tested using ANOVA.

Effect of Gender

As four TBSSB service quality dimensions (Convenience, Reliability & Security, Responsiveness, and Personalization) are considered in this study, therefore, to analyze the significant difference in TBSSB service quality dimensions on the basis of gender, following four sub-hypotheses are tested corresponding to H1.

H1.1: There is a significant difference in perception of Convenience dimension between males and females.

H1.2: There is a significant difference in perception of Reliability and Security dimension between males and females.

H1.3: There is a significant difference in perception of Responsiveness dimension between males and females.

H1.4: There is a significant difference in perception of Personalization dimension between males and females.

Results of Levene's Test for Equality of Variances reveal that variances among males and females performance perceptions are equal for all four dimensions

Convenience, Reliability and Security, Responsiveness and Personalization as $p > 0.05$. Therefore, for all these dimensions, t-values in the 'equal variance assumed' row is used and reported in table 2 for analyzing the results of independent samples t test. As shown in table 2, the results of the t-test indicate that there was no significant difference in all four TBSSB service quality dimensions (Convenience, Reliability & Security, Responsiveness and Personalization) by gender at the significance level of 0.05. Therefore, H1.1, H1.2, H1.3, and H1.4 are not supported.

Table 2: Effect of Gender on TBSSB Service Quality Dimensions (t test results)

TBSSB SQ Dimension	Levene's Test for Equality of Variances		t-test results	
	Levene Statistic	Sig.	t value	Sig.
Convenience	0.186	0.666	-0.977	0.33
Reliability and Security	1.764	0.185	-0.729	0.47
Responsiveness	0.823	0.365	-0.299	0.77
Personalization	0.966	0.326	0.612	0.54

Effect of Age

For age, education, occupation and income demographic variables, one way ANOVA was used to analyze the significant differences in TBSSB service quality dimensions. To analyze the difference in TBSSB service quality dimensions on the basis of age, following four sub-hypothesis were tested corresponding to H2.

H2.1: There is a significant difference in perception of Convenience dimension across age groups.

H2.2: There is a significant difference in perception of Reliability and Security dimension across age groups.

H2.3: There is a significant difference in perception of Responsiveness dimension across age groups.

H2.4: There is a significant difference in perception of Personalization dimension across age groups.

As per Table 3, the results indicated that the significance value for Convenience, Responsiveness, and Personalization dimension is higher than 0.05. Only for

the Reliability & Security dimension, the p-value is less than 0.05, which means F value of Reliability dimension is significant. Thus H2.2 is supported and H2.1, H2.3, and H2.4 are not supported.

For further analysis, Post hoc analysis of Reliability & Security dimension is carried out. Post hoc analysis in table 4 revealed that respondents of age group '18-25 years' differ significantly from the respondents having age 'more than 45 years' on Reliability & Security dimension. However, there is no significant difference between age group '18-up to 25 years' & 'more than 25-up to 35 years', and age group '18-up to 25 years' & 'More than 35- up to 45 years'.

Table 3: Effect of Age on TBSSB Service Quality Dimensions (ANOVA Results)

TBSSB SQ Dimension	Levene's Test for Equality of Variances		ANOVA test results	
	Levene statistic	Sig.	F value	Sig.
Convenience	0.457	0.712	2.207	0.087
Reliability and Security	2.044	0.107	2.645	0.049
Responsiveness	0.551	0.648	1.692	0.168
Personalization	1.433	0.233	1.911	0.127

Table 4: Post Hoc Analysis of Age on Reliability & Security Dimension

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18- up to 25 yrs	More than 25 -up to 35 yrs	0.18687	0.11105	0.334	-0.0996	0.4733
	More than 35- up to 45 yrs	0.20368	0.11654	0.3	-0.097	0.5043
	More than 45 yrs	.43018*	0.15704	0.032	0.0251	0.8353
More than 25 -up to 35 yrs	18- up to 25 yrs	-0.18687	0.11105	0.334	-0.4733	0.0996
	More than 35- up to 45 yrs	0.01681	0.10051	0.998	-0.2425	0.2761
	More than 45 yrs	0.24331	0.14554	0.34	-0.1321	0.6187
More than 35- up to 45 yrs	18- up to 25 yrs	-0.20368	0.11654	0.3	-0.5043	0.097
	More than 25 -up to 35 yrs	-0.01681	0.10051	0.998	-0.2761	0.2425
	More than 45 yrs	0.2265	0.14977	0.431	-0.1598	0.6128
More than 45 yrs	18- up to 25 yrs	-.43018*	0.15704	0.032	-0.8353	-0.0251
	More than 25 -up to 35 yrs	-0.24331	0.14554	0.34	-0.6187	0.1321
	More than 35- up to 45 yrs	-0.2265	0.14977	0.431	-0.6128	0.1598

*. The mean difference is significant at the 0.05 level.

Education

Four sub-hypothesis are tested corresponding to hypothesis H3 to find the difference in TBSSB service quality dimensions on the basis of education.

H3.1: There is a significant difference in perception of Convenience dimension across education levels.

H3.2: There is a significant difference in perception of Reliability and Security dimension across education levels.

H3.3: There is a significant difference in perception of Responsiveness dimension across education levels.

H3.4: There is a significant difference in perception of Personalization dimension across education levels.

When ANOVA test was applied to TBSSB service quality dimensions and education (table 5), the results demonstrated that there is a significant difference in Personalization dimension, as the p-value was less than 0.05. Other service quality dimensions are not influenced by education variable. Accordingly, H3.4 is supported and H3.1, H3.2, H3.3 are not supported.

Table 5: Effect of Education on TBSSB Service Quality Dimensions (ANOVA Results)

TBSSB SQ Dimension	Levene's Test for Equality of Variances		ANOVA test results	
	Levene statistic	Sig.	F value	Sig.
Convenience	0.611	0.544	0.043	0.958
Reliability and Security	1.065	0.346	0.177	0.838
Responsiveness	0.203	0.816	0.07	0.932
Personalization	0.882	0.415	3.131	0.045

Post hoc analysis in table 6 confirmed that respondents having education "Graduate" differ significantly from the

respondents with education "Post Graduate and above" on Personalization dimension.

Table 6: Post Hoc Analysis of Education on Personalization

(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
12th or Below	Graduate	0.04473	0.10455	0.669	-0.1608	0.2502
	Post Graduate and above	0.20884	0.1127	0.065	-0.0127	0.4304
Graduate	12th or Below	-0.04473	0.10455	0.669	-0.2502	0.1608
	Post Graduate and above	.16411*	0.07102	0.021	0.0245	0.3037
Post Graduate and above	12th or Below	-0.20884	0.1127	0.065	-0.4304	0.0127
	Graduate	-.16411*	0.07102	0.021	-0.3037	-0.0245

*. The mean difference is significant at the 0.05 level.

Occupation

Corresponding to hypothesis H4, following four sub-hypothesis are tested to find the difference in TBSSB service quality dimensions on the basis of occupation.

H4.1: There is a significant difference in perception of Convenience dimension across Occupations.

H4.2: There is a significant difference in perception of Reliability and Security dimension across Occupations.

H4.3: There is a significant difference in perception of Responsiveness dimension across Occupations.

H4.4: There is a significant difference in perception of Personalization dimension across Occupations. Results in table 7 indicated that none of the TBSSB service quality dimension differs significantly on the basis of occupation at a significance level of 5%. Therefore, H4.1, H4.2, H4.3, and H4.4 are not supported.

Table 7: Effect of Occupation on TBSSB Service Quality Dimensions (ANOVA Results)

TBSSB SQ Dimension	Levene's Test for Equality of Variances		ANOVA test results	
	Levene statistic	Sig.	F value	Sig.
Convenience	0.963	0.41	2.367	0.07
Reliability and Security	0.553	0.646	2.456	0.063
Responsiveness	1.322	0.267	1.498	0.214
Personalization	1.193	0.312	2.067	0.104

Income

To test the difference in TBSSB service quality dimensions on the basis of annual income, following four sub-hypothesis are tested for hypothesis H5.

H5.1: There is a significant difference in perception of Convenience dimension across income groups.

H5.2: There is a significant difference in perception of Reliability and Security dimension across income groups.

H5.3: There is a significant difference in perception of Responsiveness dimension across income groups.

H5.4: There is a significant difference in perception of Personalization dimension across income groups.

As shown in table 8, none of the TBSSB service quality dimension differed significantly on the basis of demographic variable annual income. As a result, H5.1, H5.2, H5.3, and H5.4 are not supported.

Table 8: Effect of Income on TBSSB Service Quality Dimensions (ANOVA Results)

TBSSB SQ Dimension	Levene's Test for Equality of Variances		ANOVA test results	
	Levene statistic	Sig.	F value	Sig.
Convenience	1.202	0.309	1.172	0.320
Reliability and Security	0.605	0.612	2.001	0.113
Responsiveness	1.089	0.353	0.201	0.896
Personalization	1.484	0.218	2.198	0.088

Discussion, Conclusions and Implications

The study is about exploring the demographic characteristics of TBSSB customers and understanding the influence of their demographic characteristics on TBSSB service quality dimensions. t-test and Analysis of Variance (ANOVA) is used to understand the influence of demographic variables on four TBSSB dimensions namely Convenience, Reliability & Security, Responsiveness and Personalization. The results of t-test illustrated that all the four TBSSB service quality dimensions do not vary significantly on the basis of gender. ANOVA results confirmed that there is a significant effect of respondents 'Age' on 'Reliability & Security' and 'Education' on 'Personalization' dimension. Post hoc analysis of Reliability & Security dimension showed that there is a significant difference between respondents of age group '18-25 years' and age 'more than 45 years'. However, there was no significant difference between other age group respondents on Reliability & Security dimension.

The positive mean difference indicates that respondents in age group '18-25 years' considered TBSSB services more reliable and secure as compared to respondents having age more than 45 years. Post hoc analysis of 'Personalization' dimension confirmed that there is a significant difference between respondents having education 'Graduate' and respondents with education 'Post Graduate and above'. Positive mean difference indicated that Graduate respondents considered TBSSB services as more personalized in comparison to Post Graduate respondents.

Research findings suggest that TBSSB users in age group 18-25 years consider TBSSB services more reliable and secure as compared to respondents having age more than 45 years. Findings also suggest that Graduate respondents consider TBSSB services more personalized as compared to Post Graduate respondents. As the age and education level of automated banking customers is found to have an influence on TBSSB service quality dimensions, it is critical for the banks to give special attention towards the needs of the customers belonging to different age groups and education levels. So, banks may devote resources for the education and training of TBSSB customers of different age and education background as per their requirements. TBSSB services are vital constituent of overall banking experience and different customers may have different requirements and preferences. So, it is essential for the banks to consider the characteristics and requirements of the TBSSB customers along with branch banking customers at the time of service design and service provision.

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